

## CLAIMS

What is claimed is:

1. A fuel purifier comprising:
  - a. a hollow cylindrically shaped body having a top cap and a bottom cap, the top cap and the bottom cap being attached to the hollow cylindrically shaped body, said top cap having an apex, and said bottom cap having a bottom;
  - b. said hollow cylindrically shaped body having a priming inlet, a collecting sump exit, a fuel inlet, a fuel outlet, a heating connector means, said priming inlet being located on said apex of said top cap, said collecting sump exit being located on said bottom of said bottom cap, said fuel inlet, said fuel outlet, and said heating connector means being located on an exterior surface of said hollow cylindrically shaped body;
  - c. said priming inlet having an air bleed means threadably attached thereto, said collecting sump exit having a drainage valve means threadably attached thereto;
  - d. a bifurcating plate, said bifurcating plate being attached to an interior surface of said hollow cylindrically shaped body;
  - e. a fuel inlet, said fuel inlet communicating with a fuel transmission conduit, said fuel transmission conduit having a fuel transmission inlet and a fuel transmission outlet, said fuel transmission inlet communicating with said fuel inlet, said outlet of said fuel transmission conduit angularly directing fuel against said bifurcating plate, causing contaminant separation of the fuel;
  - f. said bifurcating plate creating a first chamber and a second chamber, said first chamber being located in the proximity of said fuel inlet; and said second chamber being located in the proximity of a fuel outlet;
  - g. a first separating means being positionally fixed towards a bottom of said hollow cylindrically shaped body and located in said second chamber of said hollow cylindrically shaped body, a second separating means being positionally fixed towards said bottom of said hollow cylindrically shaped body and being located in said first chamber of said hollow cylindrically shaped body;
  - h. a first separator plate, said first separator plate being attached to said interior surface of said hollow cylindrically shaped body and being located in said first chamber, said

first separator plate creating an upper inlet portion and a lower inlet portion, said first separator plate additionally having holes defined therein allowing communication between said upper inlet portion and said lower inlet portion; and

- i. an angled collecting plate, said angled collecting plate being located in said second chamber, said angled collecting plate being attached to said interior surface of said hollow cylindrically shaped body and said bifurcating plate, said angled collecting plate having an upper edge, said upper edge being positioned towards an upper portion of said bifurcating plate and directing fuel towards said outlet of said hollow cylindrically shaped body.
2. The fuel purifier of claim 1 wherein;
  - a. said first separating means being a first perforated plate, said perforated plate having holes defined therein, said holes allowing fuel flow therethrough, and a means for contaminants to collect and eventually settle towards said bottom of said bottom cap and to be removed through said collecting sump exit; and
  - b. said second separating means being a second perforated plate, said perforated plate having holes defined therein, said holes allowing fuel flow therethrough, and a means for contaminants to collect and eventually settle towards said bottom of said bottom cap and to be removed through said collecting sump exit.
3. The fuel purifier of claim 1 wherein said priming means is a stop cock.
4. The fuel purifier of claim 1 wherein said drainage valve means is a stop cock.
5. The fuel purifier of claim 2 wherein said holes having a diametrical formula that is a ratio of the tubular body diameter, said ratio being between four percent and seven and one half percent.